

hotting up  
is our climate changing?

alcoa anglesea

environment report

january

2007



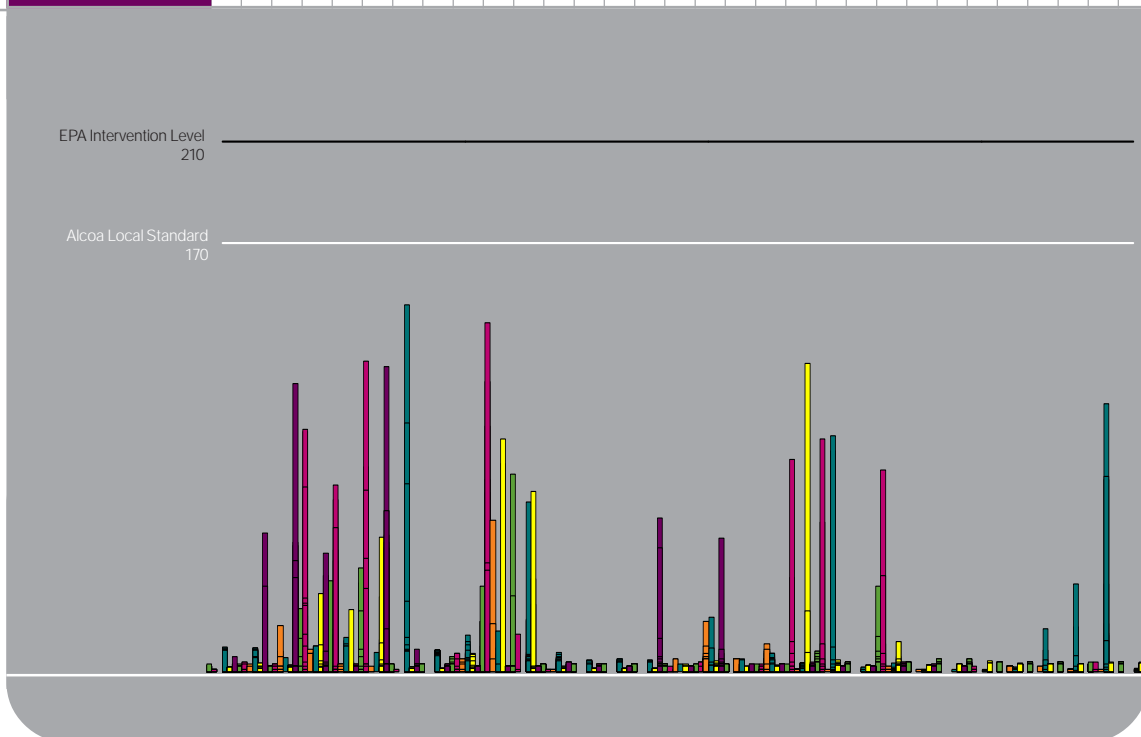
australia's aluminium

# air

Air Monitoring	Average	Maximum
Stack Monitors		
Opacity g/m <sup>3</sup> 10-minute average	0.069	0.237
Stack SO <sub>2</sub> kg/min 1-hour average <b>Licence limit</b> 111.34kg/min	67.54	88.83

Ambient Monitors	Average	Maximum
SO <sub>2</sub> 1 hour ppb		
Community Centre	3	78
Primary School	4	138
Mt Ingoldsby	1	60
Scout Camp	6	145
Camp Wilkin	3	122
Camp Road	5	121

Ambient Monitors																															
SO <sub>2</sub> Maximum 1 hour averages (ppb)																															
Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Community Centre	3	3	2	25	36	41	3	3	6	34	78	3	3	3	3	3	3	3	3	3	8	4	34	4	5	5	4	4	4	4	
Primary School	1	4	3	96	74	123	1	0	7	138	15	1	0	0	0	2	4	0	3	84	92	0	80	0	0	2	0	0	0	4	0
Mt Ingoldsby	0	3	18	9	3	2	0	0	5	60	0	1	0	0	0	5	20	5	11	1	1	0	2	1	0	0	2	2	1	1	0
Scout Camp	10	9	6	10	14	8	145	9	14	16	67	8	4	5	4	3	22	5	7	4	93	2	3	1	1	1	2	17	35	106	1
Camp Wilkin	2	3	3	31	25	53	2	1	7	92	71	2	1	1	1	3	4	2	3	122	5	3	12	3	3	4	3	3	3	4	4
Camp Road	-	-	3	55	114	47	2	-	3	121	9	3	2	2	2	3	4	-	2	2	61	3	53	3	3	4	2	2	4	3	2





## australia is hotting up

The annual forecast by Britain's Meteorological Office predicts that the average temperature across the world for 2006 was 0.54 degrees warmer than the long-term average of 14 degrees. They also believe there is a 60 per cent probability that 2007 will be as warm as, or warmer than, 1998 — which was the world's hottest year since records began in 1850.

This information represents a warning that climate change is happening around the world. The world's 10 warmest years have all occurred in the last 12 years. The leading international body of climate scientists has already agreed this is evidence of humans accelerating global warming.

The BMO's previous 2001 report concluded that global temperatures could rise by between 1.5 and 5.8 degrees over the next century without significant cuts in greenhouse gas emissions, particularly from burning fossil fuels such as coal and petrol. Scientists have repeatedly warned that the longer the world delays making those cuts, the greater the risks of more extreme weather, including droughts, bushfires and coastal flooding.

A recent World Meteorological Organisation report found that 2006 was the sixth hottest on record and was marked by drought and heavy flooding in the Horn of Africa, record bushfires in the US, torrential rain in the Philippines, shrinking sea ice in the Arctic and the warmest autumn in Europe.

At the same time, the Australian Bureau of Meteorology released its annual Climate Statement which confirmed that Australia's temperatures are getting warmer slightly faster than the global average and we know that of Australia's 20 hottest years, 15 have occurred since 1980.

### Make an Impact

Australian households generate almost one-fifth of Australia's greenhouse gas emissions through everyday activities. Alcoa and Greening Australia have partnered to develop a greenhouse footprint reduction program for the families of Alcoa employees and their immediate communities. Known as Make an Impact, the program includes access to a greenhouse calculator and a kit featuring a range of tips on how to lower energy and water consumption and more effectively manage waste.

- > Switch to Green Power accredited electricity  
Eliminates household emissions from electricity
- > Use energy efficient whitegoods  
Up to 50% reduction in household emissions from electricity
- > Use a triple-A rated showerhead  
Up to 12% reduction in household emissions
- > Use energy-efficient light globes  
Up to 10% reduction in household emissions
- > Check the fuel efficiency of your next car  
Up to 70% reduction in transport emissions

### ANIMALS OF THE ANGLESEA HEATH

#### SOUTHERN BROWN TREE FROG (*Litoria ewingi*)

Adult length: 25-45mm

Description: tadpoles are pale golden-yellow to dark grey with clear fins; adults have pale fawn, cream, orange, or light brown sides

Distribution: endemic to south-eastern Australia

Habitat: adults can be found in all habitat types, even in the gardens of suburbia, eggs and tadpoles can be found in ponds, dams, lakes and flooded roadside ditches

Call: a series of rapid harsh, whirring pulsing notes repeated 5-15 times - 'creeeeee creee creee cree cree cree' - first note is the longest

**Frogs and climate change:** Frogs need water to breed and any reduction or changes in rainfall could reduce the ability of these animals to reproduce. Higher temperatures contribute to the drying out of breeding pools and to the deaths of tadpoles and eggs. Drier conditions also kill adult frogs, which lose internal water through their permeable skin

### SOUTHERN BROWN TREE FROG



LAND

RAINFALL (mm)

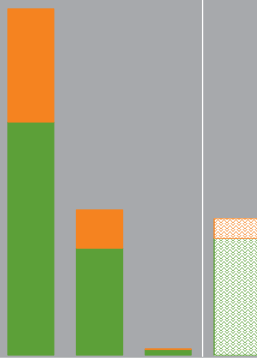
Month	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
2007 Rainfall	40.0												40.0
1968-2006 Average	44.6												44.6



WATER

TOWN WATER USE (ML)

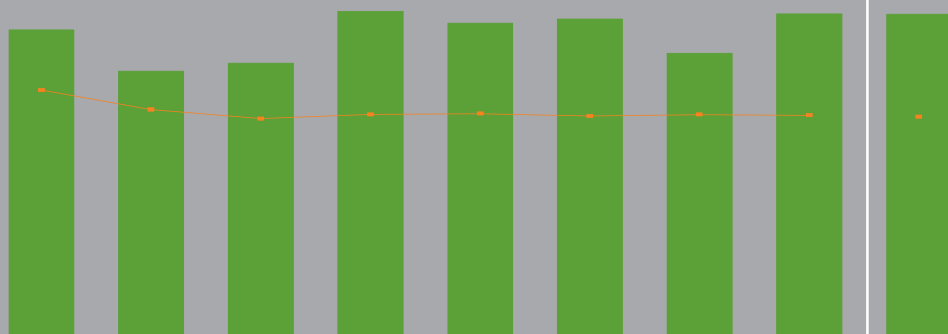
	2000	2006	2007	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Process	23.9	11.0	0.7	0.7											
Amenity	11.6	3.8	0.3	0.3											



AIR

GREENHOUSE GAS (GHG) TOTAL (Mt) & GHG EMISSION EFFICIENCY (t/MWh)

	1990	2000	2001	2002	2003	2004	2005	2006	2007
GHG Mt	1.42	1.23	1.27	1.50	1.45	1.47	1.31	1.49	1.49
◆ GHG t/MWh	1.34	1.24	1.19	1.21	1.21	1.20	1.21	1.20	1.20



# environmental improvement

Environmental Management Targets	January	2007 Total	Forecast	2007 Target
Reportable Environmental Incidents	0	0	0	0
Monthly EHS ASAT Audit Completion (%)	100	94	100	90
Air Emission Targets	January	2007 Total	Forecast	2007 Target
Ambient SO <sub>2</sub> ( no. readings > 210ppb)	0	0	0	0
Stack SO <sub>2</sub> (no. hrs > 100kg/min)	0	0	0	0
SO <sub>2</sub> Load Reductions (lost MWh)	1121	1121	13452	N/A
GHG Efficiency (t CO <sub>2</sub> e/MWh)	1.20	1.20	1.20	1.20
Opacity (10 min av > 0.25g/m <sup>3</sup> normal operation)	0	0	0	0
Water Targets	January	2007 Total	Forecast	2007 Target
Town Water (ML)	0.7	0.7	8.4	14.2
Bore Water (ML)	274	274	3288	2667
Waste Targets	January	2007 Total	Forecast	2007 Target
Waste to Landfill (t)	0.0	0.0	0.0	9.0
Solid Prescribed Waste to Landfill (t)	0.0	0.0	0.0	0.0
Mine Rehabilitation Targets	2007 Total		2007 Target	
2006 Area Cleared (ha)	0.0		3.5	
2006 Area Rehabilitated (ha)	0.0		> 3.5	
2005 Mine Rehabilitation Species Richness (%)	N/A		100	

## OUR ENVIRONMENT AND OUR EMPLOYEES..

### Climate Change is a very topical issue. What's Alcoa's position on this subject?

Alcoa has a long standing position of promoting realistic and effective policy responses to climate change. And at a time when the debate is heading in Australia toward a serious discussion on emissions trading it is important industry is ready and able to contribute constructively to both the debate and implementation of solutions.

Alcoa of Australia supports the introduction of a properly designed emissions trading scheme, including a national scheme, that includes all major emitters and sectors to ensure greenhouse reductions are achieved.

### What activities can employees undertake to help be part of the solution?

Alcoa has teamed with environmental organisation Greening Australia, to equip employees and their families to cut Australia's domestic greenhouse emissions by around 21,000 tonnes a year. I encourage all employees to log on to [www.alcoa.com.au/makeanimpact](http://www.alcoa.com.au/makeanimpact) and see what they and their families can do to make an impact.

...KYLIE CIRAK

